

REMARKS

Claims 4, 8, 9 and 14-20 are pending. Claims 4, 15 and 17 are amended herein. No new matter is added as a result of the Claim amendment.

Claim Objection

Claim 17

In the Office Action, the Examiner rejected Claim 17 because it lacks proper antecedent basis. Applicants have amended Claim 17 herein. Therefore, the objection to Claim 17 is moot.

Drawing Objection

In the Office Action, the Examiner objected to the drawings under 37 CFR 1.38(a). The drawings must show every feature of the invention specified in the claims. Therefore, a wiper, must be shown.

Applicants respectfully disagree in part and overcome in part. Applicants respectfully submit that the wiper functionality is clearly shown as item 520 of Figure 5. That is, as stated in the Specification on page 8 line 25 through page 9 line 8, line 520 shows the operation of the wiper. For this reason, Applicants respectfully submit that the claimed feature is shown in the drawings. As such, Applicants respectfully submit that the rejection under 37 CFR1.38 (a) is overcome.

Applicants further submit that the wiper feature of item 520 is clearly described in the specification on page 2 lines 1-15. That is, the wipers are capable of being located in any of a plurality of locations such as assembled on a carriage or other associated moving parts. For this reason, Applicants respectfully submit that the rejection under 37 CFR1.38 (a) is also overcome.

35 U.S.C. § 102 Rejections

Claims 15-18 are rejected under 35 U.S.C. § 102 (e) as being anticipated by Blasing et al., (U.S. Patent 6,653,620), hereinafter referred to as "Blasing." The Applicants respectfully submit that Blasing does not teach or suggest the claim limitations recited in Claims 15-18 of the present invention.

Applicants respectfully state that Claim 15 includes the features "receiving said light after it has been transmitted through said calibration area;

converting said light transmitted through said calibration area into a calibration signal;

using said calibration signal to determine whether or not a degree of transparency of said calibration area is sufficient, wherein said degree of transparency is decreased as contaminants are deposited on said code strip; and

if said transparency of said calibration area is insufficient, increasing a current to said light source to compensate for said insufficient transparency of said entire code strip based on said calibration area without requiring any input from said encoding area or said indexing area."

Support for the claimed features can be found throughout the Figures and Specification including Page 7 lines 10-30 and Figure 2.

Applicants understand Blasing to teach determining a relative brightness between a plurality of tracks by evaluating the signals of a code track as a function of the difference in brightness that is found between a code track signal (which is relatively brighter) and a non-track signal (which is relatively darker). That is, Applicants understand Blasing, during operation, to evaluate a first code track and then evaluate a second non-track signal. Then, Applicants understand Blasing to compare and contrast the two signals to determine a difference in brightness such as a ratio.

In contrast to Blasing, the detection recited in Claim 15 provides the Claimed feature “if said transparency of said calibration area is insufficient, increasing a current to said light source to compensate for said insufficient transparency of said entire code strip based on said calibration area without requiring any input from said encoding area or said indexing area.” That is, Applicants respectfully submit that Claim 15 clearly features evaluating the entire code strip based on a single calibration area measurement. Applicants do not understand Blasing to teach or anticipate the feature of increasing current to a light source based on a single measurement. For this reason, Applicants respectfully submit that Blasing does not teach or anticipate the features as recited in Claim 15 of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claim 15 under 35 U.S.C. § 102 (e) is overcome

The Examiner has stated that Blasing teaches the featured claims in column 4. However, Applicants understand Blasing to teach, at the bottom of column 3, adapting at least one parameter by capturing the amplitude of a reference signal in addition to the signal of at least one code track. That is, Applicants again understand Blasing to teach and anticipate the capturing of a plurality of signals to perform any evaluations. As stated herein, this understanding of Blasing clearly teaches against the claimed feature of “increasing a current to said light source to compensate for said insufficient transparency of said entire code strip based on said calibration area without requiring any input from said encoding area or said indexing area.” For this additional reason, Applicants respectfully submit that Blasing does not teach or anticipate the features as recited in Claim 15 of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claim 15 under 35 U.S.C. § 102 (e) is overcome

Moreover, Applicants understand Blasing to utilize the brightness ratio as a means for determining whether or not light sensor transducers are or are not exposed to the light source. Thus, Applicants do not understand Blasing to teach or anticipate the feature “compensate for said

insufficient transparency of said entire code strip” as claimed. Instead, Applicants understand Blasing to anticipate a method for determining which transducers are exposed to the light source. For this reason, Applicants respectfully submit that Blasing does not teach or anticipate the features as recited in Claim 15 of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claim 15 under 35 U.S.C. § 102 (e) is overcome.

Claims 16-18 depend from Claim 15 and recite additional limitations descriptive of embodiments of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claims 16-18 under 35 U.S.C. § 102 (e) are also overcome.

35 U.S.C. § 103 Rejections

Claims 4, 8, 9 and 14

Claims 4, 8, 9 and 14 are rejected under 35 U.S.C. § 103 (a) as being obvious over Blasing. Applicants have reviewed the cited reference and respectfully submit that the present invention is not rendered obvious over Blasing for the following rationale.

Applicants respectfully state that Claim 4 includes the features “wherein if said degree of transparency of said calibration area is insufficient, said circuit increases a current to said photo-emitter to compensate for said insufficient transparency of said entire code strip based on said calibration area without requiring any input from said encoding area or said indexing area.” Support for the claimed features can be found throughout the Figures and Specification including Page 7 lines 10-30 and Figure 2.

Applicants understand Blasing to teach determining a relative brightness between a plurality of tracks by evaluating the signals of a code track as a function of the difference in brightness that is found between a code track signal (which is relatively brighter) and a non-track signal (which is relatively darker). That is, Applicants understand Blasing, during operation, to evaluate a first code

track and then evaluate a second non-track signal. Then, Applicants understand Blasing to compare and contrast the two signals to determine a difference in brightness such as a ratio.

In contrast to Blasing, the detection recited in Claim 4 provides the Claimed feature “if said degree of transparency of said calibration area is insufficient, increasing a current to said light source to compensate for said insufficient transparency of said entire code strip based on said calibration area without requiring any input from said encoding area or said indexing area.” That is, Applicants respectfully submit that Claim 4 clearly features evaluating the entire code strip based on a single calibration area measurement. Applicants do not understand Blasing to teach or render obvious the feature of increasing current to a light source based on a single measurement. For this reason, Applicants respectfully submit that Blasing does not teach or render obvious the features as recited in Claim 4 of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claim 4 under 35 U.S.C. § 103 (a) is overcome

The Examiner has stated that Blasing teaches the featured claims in column 4. However, Applicants understand Blasing to teach, at the bottom of column 3, adapting at least one parameter by capturing the amplitude of a reference signal in addition to the signal of at least one code track. That is, Applicants again understand Blasing to teach and anticipate the capturing of a plurality of signals to perform any evaluations. As stated herein, this understanding of Blasing clearly teaches against the claimed feature of “increasing a current to said light source to compensate for said insufficient transparency of said entire code strip based on said calibration area without requiring any input from said encoding area or said indexing area.” For this additional reason, Applicants respectfully submit that Blasing does not teach or render obvious the features as recited in Claim 4 of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claim 4 under 35 U.S.C. § 103 (a) is overcome

Moreover, Applicants understand Blasing to utilize the brightness ratio as a means for determining whether or not light sensor transducers are or are not exposed to the light source. Thus, Applicants do not understand Blasing to teach or render obvious the feature "compensate for said insufficient transparency of said entire code strip" as claimed. Instead, Applicants understand Blasing to teach a method for determining which transducers are exposed to the light source. For this reason, Applicants respectfully submit that Blasing does not teach or suggest the features as recited in Claim 4 of the present invention. Accordingly, the Applicants respectfully submit that the rejection of Claim 4 under 35 U.S.C. § 103 (a) is overcome.

With respect to Claims 8, 9 and 14, Applicants respectfully point out that Claims 8, 9 and 14 depend from the allowable Independent Claim 4 and recite further features of the present claimed invention. Therefore, Applicants respectfully state that Claims 8, 9 and 14 are allowable as pending from an allowable base Claim.

Claims 19 and 20

Claims 19 and 20 are rejected under 35 U.S.C. § 103 (a) as being obvious over Blasing in view of Benz et al., (6,483,104), hereinafter referred to as "Benz." Applicants have reviewed the cited reference and respectfully submit that the present invention is not rendered obvious over Blasing in view of Benz for the following rationale.

For the reasons provided herein in the response to the rejection of Claims 4 and 15 and not repeated for purposes of brevity and clarity, Applicants respectfully submit that Blasing does not anticipate or render obvious the features of Claims 4 and 15. For this reason, Applicants respectfully submit that Claims 4 and 15 are allowable. The Examiner has not relied on Benz to teach or render obvious the features of Claims 4 and 15. Therefore, Applicants respectfully submit that Claims 4 and 15 are not taught or rendered obvious over Blasing in view of Benz. For this additionally reason, Applicants respectfully submit that Claims 4 and 15 are allowable.

With respect to Claim 19, Applicants respectfully point out that Claim 19 depends from the allowable Claim 4 and recites further features of the present claimed invention. Therefore, Applicants respectfully state that Claim 19 is allowable as pending from an allowable base Claim.

With respect to Claim 20, Applicants respectfully point out that Claim 20 depends from the allowable Claim 15 and recites further features of the present claimed invention. Therefore, Applicants respectfully state that Claim 20 is allowable as pending from an allowable base Claim.

CONCLUSION

In light of the above remarks, the Applicants respectfully request reconsideration of the rejected Claims.


Based on the arguments presented above, the Applicants respectfully assert that Claims 4, 8, 9 and 14-20 overcome the rejections of record and, therefore, the Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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